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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,265	09/26/2001	Satyendra Yadav	42390P11647	3464

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EXAMINER

NGUYEN, VAN H

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,265

Applicant(s)

YADAV, SATYENDRA

Examiner

VAN H NGUYEN

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/26/01
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-14 are presented for examination.

Claim Objections

2. Claims 1-10 and 14 are objected to because of the following informalities: the **abbreviations** used in these claims should be defined.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made

4. Claims 1, 3, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sharma et al.** (U.S. 5,537,417).
5. Sharma is provided by Applicant in the IDS filed September 26, 2001.
6. As to claim 1, Sharma teaches the invention substantially as claimed including a method comprising:

- receiving data from an application (*e.g., upon application As call to the socket layer; col.3, lines 54-61*);
- creating a socket (*e.g., a socket is created; col.3, lines 54-61 and col.4, lines 36-51*);
- associating the socket with an AF_INET address family (*e.g., the address family AF_INT; col. 4, lines 36-51*) and performing a mapping between a socket API (*e.g., the socket API; col.4, lines 1-12*) and a socket layer if the application is a legacy application (*col.4, lines 1-12; col.4, lines 52-62; and col.9, lines 54-66*); and
- associating the socket with an AF_IB address family (*e.g., the address family AF_NETBIOS; col. 4, lines 36-51*) and performing a mapping between the socket API and an IB verb if the application is a new application (*col.4, lines 1-12; col.4, lines 52-62; and col.9, lines 54-66*).

Sharma does not specifically use the term “an SPD layer.”

However, Sharma discloses “*the socket layer*” (col.4, line 67-col.5, line 8 and fig. 1).

It would have been obvious to one of ordinary skill in the art to have applied the teaching of Sharma for “an SPD layer” in order to provide means for determining the protocol for the applications to communicate with each other. Therefore, giving the distributed application a significant performance gain.

7. As to claim 3, note the discussion above of claim 1 above for rejection of “the application is a new application, the act of performing a mapping between the socket API and an IB verb comprising performing a mapping between the socket API and the SDP layer.”

8. As to claim 7, note the rejection of claim 1 above. Claim 7 is the same as claim 1, except claim 7 is an article of manufacture claim and claim 1 is a method claim.

9. As to claim 9, it includes the same subject matter as in claim 3, and is similarly rejected under the same rationale.

10. Claims 2, 4-6, 8, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sharma** in view of **Petty et al.** (U.S. 6,594,712).

11. As to claim 2, Sharma does not explicitly teach a channel adapter and an IBA fabric.

Petty teaches a channel adapter (*e.g., An Infiniband channel adapter; abstract and fig. 1*) and an IBA fabric (*e.g., IB fabric 114; col.6, lines 15-29 and fig. 2*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Petty and Sharma because Petty's teaching would have provided means for creating an interconnect infrastructure of an InfiniBand architecture that is capable of supporting tens of thousands of nodes in a single subnet.

12. As to claim 4, it is directed to a system for performing the method of claim 1 above, and is similarly rejected under the same rationale. Claim 4 further recites a channel adapter, an IBA fabric, and an InfiniSock layer.

Sharma teaches InfiniSock layer (*e.g., a socket layer; col.3, lines 54-61 and fig. 1*), but is silent on a channel adapter, an IBA fabric.

Petty teaches a channel adapter (*e.g., An Infiniband channel adapter; abstract and fig. 1*) and an IBA fabric (*e.g., IB fabric 114; col.6, lines 15-29 and fig. 2*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Petty and Sharma because Petty's teaching

would have provided means for creating an interconnect infrastructure of an InfiniBand architecture that is capable of supporting tens of thousands of nodes in a single subnet.

13. As to claim 5, Sharma teaches a socket (*e.g., a socket; col.3, lines 54-61*), the socket associated with one of the AF_NET address family and the AF_IB address family (*col.4, lines 1-13 and 36-51*).

14. As to claim 6, Sharma teaches, the InfiniSock layer to provide a mapping between the socket API and the socket layer for a new application (*col.4, lines 1-13 and 36-51*).

Sharma does not specifically use the term “the SPD layer.” Note the discussion of claim 1 above for rejection of “the SPD layer.”

15. As to claim 8, it includes the same subject matter as in claim 2, and is similarly rejected under the same rationale.

16. As to claim 10, the rejection of claim 1 above is incorporated herein in full. Claim 10 further recites an IBA fabric, a channel adapter, an InfiniSock layer, and a first system and a second system.

Sharma teaches an InfiniSock layer (*e.g., a socket layer; col.3, lines 54-61 and fig. 1*), a first system and a second system (*col.12, lines 5-7*), but is silent on a channel adapter, an IBA fabric.

Petty teaches a channel adapter (*e.g., An Infiniband channel adapter; abstract and fig. 1*) and an IBA fabric (*e.g., IB fabric 114; col.6, lines 15-29 and fig. 2*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Petty and Sharma because Petty’s teaching

would have provided means for creating an interconnect infrastructure of an InfiniBand architecture that is capable of supporting tens of thousands of nodes in a single subnet.

17. As to claim 11, Sharma teaches the applications of the first system including a legacy application and a new application (*fig. 2 and associated text*).

18. As to claim 12, Sharma teaches the second system including a legacy application (*col.4, lines 1-12*).

19. As to claim 13, Sharma teaches the second system including a new application (*col.4, lines 1-12*).

20. As to claim 14, the rejection of claim 1 above is incorporated herein in full. Claim 14 further recites a channel adapter coupling the second system with the IBA fabric.

Petty teaches a channel adapter coupling the second system with the IBA fabric (*col.6, lines 14-29 and figs. 1-2*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Petty and Sharma because Petty's teaching would have provided means for creating an interconnect infrastructure of an InfiniBand architecture that is capable of supporting tens of thousands of nodes in a single subnet.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Byers et al. (U.S. 6693901) discloses "Backplane configuration without common switch fabric."

- Beukema et al. (U.S. 6578122) discloses "Using an access key to protect and point to regions in windows for infiniband."

- Acharya (U.S. 6457698) discloses "Supporting mapping of layer 3 priorities in an infiniband network." Method and apparatus for transferring data between IP network devices and SCSI and fibre channel devices over an IP network

- Latif et al. (U.S. 6400730) discloses "Method and apparatus for transferring data between IP network devices and SCSI and fibre channel devices over an IP network."

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H NGUYEN whose telephone number is (703) 306-5971. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. The examiner can also be reached on alternative Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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